

**Annex to Form PCT/ISA/206  
COMMUNICATION RELATING TO THE RESULTS  
OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No  
**PCT/GB2004/003566**

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:  
see 'Invitation to pay additional fees'
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | US 2002/140419 A1 (DURET DENIS)<br>3 October 2002 (2002-10-03)   | 1                     |
| Y          | abstract<br><br>page 1, right-hand column, paragraph 9 -<br>paragraph 21<br>page 2, left-hand column, paragraph 32 -<br>paragraph 33<br>page 4, right-hand column, paragraph 79<br>figure 1  | 1-4, 6,<br>11, 18, 19 |
| X          | GB 1 257 692 A (DEREK WAINE WHITEHEAD)<br>22 December 1971 (1971-12-22)<br>page 1, line 25 - page 1, line 50<br>page 1, line 78 - page 2, line 60<br>figures 1-3   | 1                     |
| Y          | US 6 134 420 A (FLOWERDEW PETER M ET AL)<br>17 October 2000 (2000-10-17)<br>abstract<br>column 1, line 66 - column 3, line 16<br>column 5, line 24 - line 49<br>column 16, line 40 - column 17, line 22<br>column 18, line 28 - line 67; figure 22<br><br>-/-- | 1-4, 6,<br>11, 18, 19 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|--|--|-----------------------|
| Category *   | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| A  | DE 37 19 179 C (GOETTING KG)<br>15 December 1988 (1988-12-15)<br>abstract<br>claim 1<br>column 2, line 50 - column 3, line 1<br>figures 1-3  | 1,18                  |
| A  | GB 2 335 323 A (MOTOROLA LTD)<br>15 September 1999 (1999-09-15)<br>abstract<br>page 3, line 7 - line 17<br>page 4, line 17 - line 30<br>page 5, line 13 - line 24<br>figure 1                                      | 1,18                  |
| A  | GB 2 311 190 A (CENTRAL RESEARCH LAB LTD)<br>17 September 1997 (1997-09-17)<br>page 1, line 26 - page 2, line 2<br>page 2, line 10 - line 16<br>page 2, line 24 - line 32<br>page 8, line 17 - line 33<br>figure 5 | 1,18                  |

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-25

Radio frequency tunable receiver for use in a proximity detecting system, capable of modifying the frequency of the received signals which are in the range between 100 kHz and 10 MHz. The receiver comprises at least one antenna coil for receiving signals. The antenna coils are perpendicular to each other and are selected sequentially. The distance between transmitter and receiver is calculated based on the received signal strength.

2. claims: 26-37

Frequency radio transmitter for use in a proximity detection system and being operable to selectively transmit signals at plurality of different frequencies and comprising an antenna circuit having a variable impedance and a frequency bandwidth associated therewith.

It is therefore considered, that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3 PCT).

II - Reasons for lack of unity

The only technical features in common to both groups are:

1) Use of different frequencies for communication in a proximity detection system.

This technical feature is known in the prior art (see US2002/0140419). It is shown in the abstract; page 1, paragraphs 9 to 21; page 2, paragraphs 32 and 33; page 4, paragraph 79 and figures 1 and 2.

The special technical features according to Rule 13.2 PCT are the following:

Group I:

- receiver comprising one or more antenna coils perpendicular to each other.
- receiver frequency range being between 100 kHz and 10 MHz.
- calculation of distance between transmitter and receiver based on measurements of signal strength received by each antenna.

Group II:

- transmitter comprising a variable impedance and frequency

bandwidth associated.

- transmitter capable of changing transmission frequency.

These features are not the same nor are they corresponding, because they solve different objective problems, namely:

Group I: Determining the distance between a transmitter and a receiver from signal strength measurements taken at a plurality of perpendicular coil antennas at the receiver.

Group II: Providing a transmitter capable of transmitting at a plurality of frequencies.

Therefore the requirement of Rule 13.2 PCT is not fulfilled for these groups of claims. Hence, Rule 13.1 PCT is not satisfied and the subject-matter of the two groups of claims are not linked by a single inventive concept.

Finally applicants attention is drawn to the following. This objection has been made on the assumption that it is his/her intention to draft independent claims related to the different groups of inventions defined above, that is to say on the assumption that claims 26 to 37 are not directly linked to the first group of inventions. However, if they are made dependent on the first subject the requirements of unity of invention are fulfilled and the search can be considered to have been completed.

**Patent Family Annex**  
Information on patent family members

International Application No  
**PCT/GB2004/003566**

| Patent document<br>cited in search report |    | Publication<br>date |      | Patent family<br>member(s) | Publication<br>date |
|---|----|---------------------|------|----------------------------|---------------------|
| US 2002140419                             | A1 | 03-10-2002          | FR   | 2812481 A1                 | 01-02-2002          |
|   |    |                     | EP   | 1200794 A1                 | 02-05-2002          |
|   |    |                     | WO   | 0210674 A1                 | 07-02-2002          |
|   |    |                     | JP   | 2004505262 T               | 19-02-2004          |
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| GB 1257692                                | A  | 22-12-1971          | NONE |                            |                     |
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| US 6134420                                | A  | 17-10-2000          | US   | 5966641 A                  | 12-10-1999          |
|   |    |                     | AU   | 2240699 A                  | 09-08-1999          |
|   |    |                     | WO   | 9938273 A2                 | 29-07-1999          |
|   |    |                     | AU   | 5096398 A                  | 29-05-1998          |
|   |    |                     | US   | 6061030 A                  | 09-05-2000          |
|   |    |                     | WO   | 9820626 A1                 | 14-05-1998          |
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| GB 2335323                                | A  | 15-09-1999          | NONE |                            |                     |
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| GB 2311190                                | A  | 17-09-1997          | NONE |                            |                     |
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